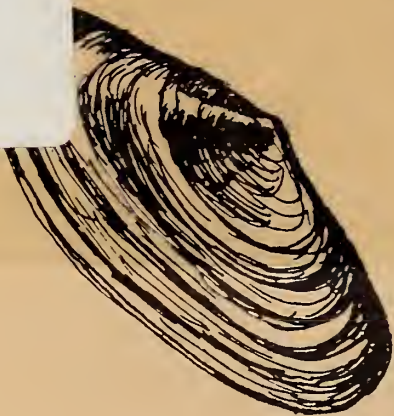


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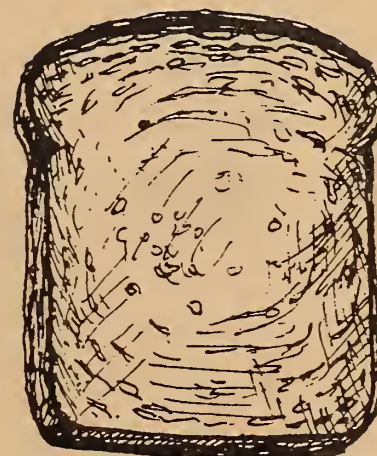
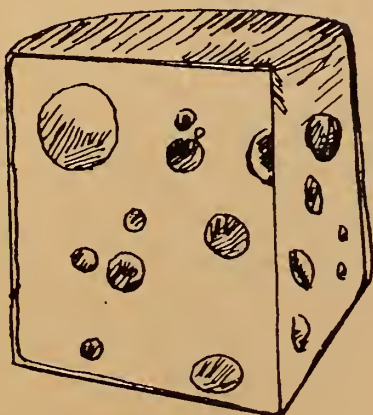


# Nutrition Education and Training Program



# ALASKA'S VIEWS ON NUTRITION

Reprint of articles from the Alaska Education News





## Introduction

The Nutrition Education and Training Program was established by Public Law 94-142. This legislation was designed to give state educational agencies the opportunity to develop and implement educational programs on nutrition. The following are the goals of the program through the Nutrition Education and Training Program.

- GOAL AREA I: To instruct STUDENTS with regard to the nutritional value of food and the relationship between food and health.
- GOAL AREA II: To instruct TEACHERS in the principles and practices of nutrition education.
- GOAL AREA III: To train SCHOOL FOOD-SERVICE PERSONNEL in the principles and practices of food service management and nutrition.
- GOAL AREA IV: To develop and use CLASSROOM MATERIALS AND CURRICULA for children, teachers, and food service personnel.

Individual State Plans are based on the priority needs identified from the ongoing needs assessment that coordinates program plans for the teachers, students, and food service personnel served by this legislation.

The articles compiled in this booklet have been published over the last two and a half years through the courtesy of the Alaska Education News. The intent of the articles have been to share and make available different information and suggestions on nutrition programs and plans that are currently working and being explored by people knowledgeable about nutrition.

## Special Acknowledgement

The Nutrition Education and Training Program State Advisory Council would like to acknowledge the support and dedication of Marge Hermans in providing space for nutrition articles each month in the Alaska Education News.

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# Anytown, Alaska is hungry community

By Glen Ray

The time is after school. The place is Anytown, Alaska. The mood is hungry.

Just released from school, two elementary-age children slam through the kitchen door of their home. Seven hours have passed since breakfast when each hastily consumed two pieces of toast and a glass of lemonade. It has been three hours since lunch in which they shared a can of soda pop and a large bag of chips.

A note on the table propped up by a bowl of fruit tells them that their mother and father will be working late and that they are to fix themselves something to eat. The choice of food is their own.

Opening the refrigerator door they push away a package of meat, brush aside cheeses and vegetables, dislodge a carton of eggs and at last find what they are seeking behind the peanut butter and bread. Each child withdraws from the refrigerator with a cold soda.

Drinks in hand they leave the house on the way to the store to buy something to eat.

This fantasy underscores the central theme of nutritional problems in Alaska. Individuals are more likely to disregard health rules out of carelessness than out of ignorance. It has been noted by professionals that improvement in the area of nutrition education for all age levels will depend primarily on the development of appropriate values. Values toward food in turn affect every aspect of a person's life.

Nutrition education needs assessments were conducted throughout Alaska during 1978 in an effort to document nutrition-related health problems which are affecting children. The four problems most often documented were dental caries, anemia, obesity and low resistance to infection. Dietary habits which contributed to these states of ill health also were noted. Improper diets, excessive sugar intake, cultural transition, the inability to identify iron and calcium-rich foods as well as the frequency of snacks were cited as causes of nutrition-related health problems.

Many educators, health workers and nutritionists have been aware of these problems for years and in small ways have tried to help.

In 1978, a federally funded program, the Nutrition Education and Training Program (NETP), was begun in Alaska to help organize efforts to respond to nutrition-related problems on a large scale.

Since the initial stages of NETP in Alaska, the program has been administered by Ruth Benigno of School Food Services at the Department of Education. It is guided by an involved and concerned group of 14 individuals representing health, nutrition and educational interests throughout the state.

Over the past three years this group, the Alaska State Advisory Council for NETP, has guided the course of development from an effective district level program in the North Slope Borough School District to an ambitious endeavor to enhance nutrition education on a statewide level.

During the 1979-80 school year, NETP sponsored a field test of an Alaskan developed elementary nutrition education curriculum guide entitled *Reading, Writing and Smoked Salmon*. In addition, this program produced several radio and television public service announcements, published classroom wall posters which support the media campaign, and conducted inservice workshops throughout Alaska.

Building on the previous year's successes and experience, NETP plans a large number of activities during the 1980-81 school year. *Reading, Writing and Smoked Salmon* has been reworked based on recommendations from a diversity of professionally committed people and will be published this fall.

The guide will be distributed within the state through a network of interested teachers, and copies will be sent to all Alaska school districts.

A two-day sectional at the spring NEA Alaska conference will be organized to present nationally known speakers on health and nutrition.

Support in the form of statewide publicity will be extended to the Anchorage Community College's Dietetic Assistance Program.

A School Food Service Cook's Workshop manual, developed by the North Slope Borough, will be made available to districts interested in improving their school food service program.

Continuing needs assessments also will be undertaken on a secondary school level and in selected Alaska communities in preparation for future planning.

NETP recognizes the need for improved nutrition and is attempting to meet those needs through programs which will influence individual choices. The end goal is a more healthful population. The method for attaining that goal is through commitment, cooperation and effort.

In the coming issues of the *Alaska Education News* information will be presented by a variety of knowledgeable professionals on pertinent nutrition-related topics.

## Nutrition Education & Training Program State Advisory Council

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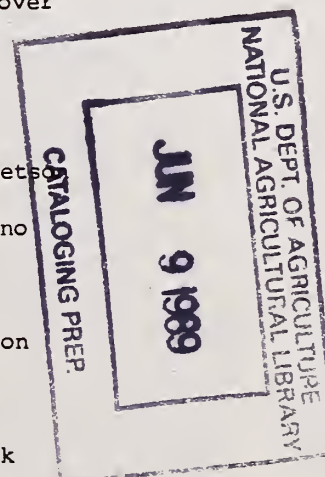
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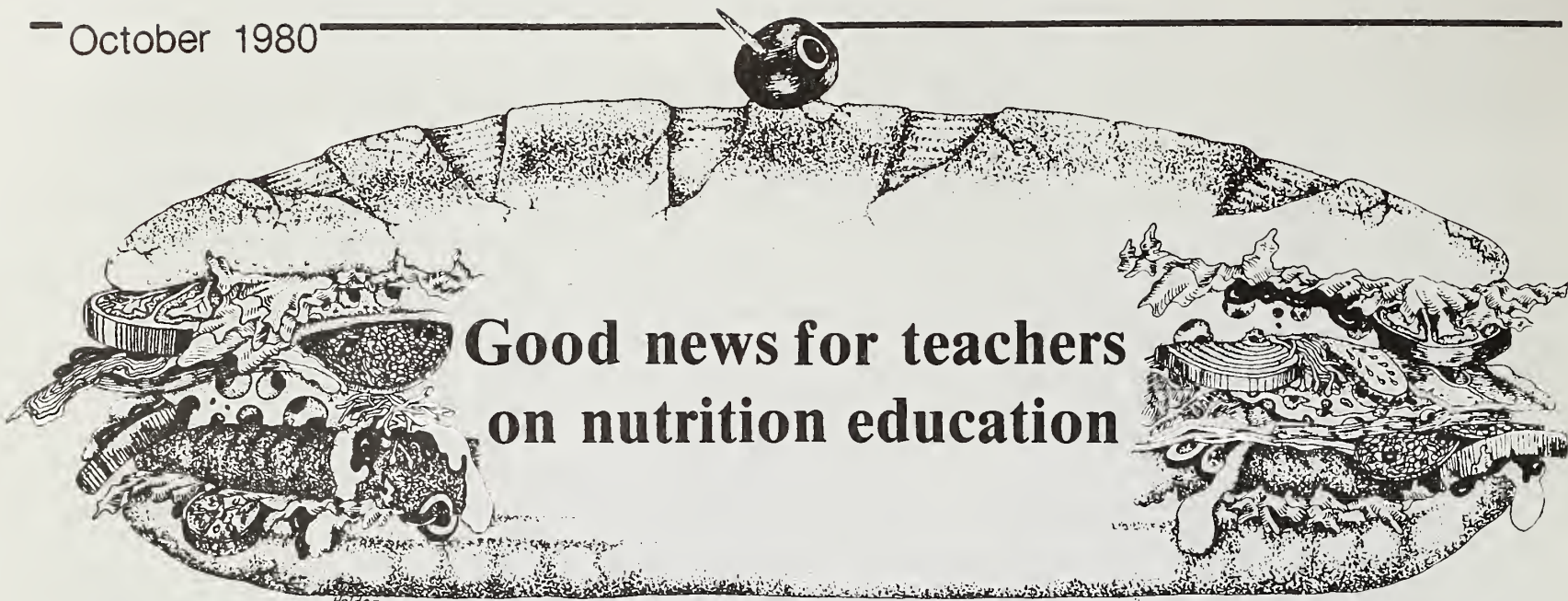
Kake, Alaska

Jan Bauer

Auke Bay, Alaska







By Adele M. Roberts  
South East Regional Resource Center

Nutrition has become a popular as well as controversial topic in recent years. A significant consequence of this nation-wide attention has been an increased awareness of the important role that nutrition plays in achieving and maintaining wellness.

The good news for teachers is that students are now more than ever receptive to nutrition and health information and home economics courses which offer an opportunity to explore consumer issues and personal decision-making skills related to foods. To meet this rising interest, more instructional materials are available now for teachers to bridge the health information gap.

The *Reading, Writing, and Smoked Salmon* Alaska nutrition curriculum guide for grades K-6, available through the Department of Education and the South East Regional Resource Center, is one good source of nutrition information and curriculum ideas which address Alaska concerns. Information from this guide has been excerpted to answer the following basic questions regarding nutrition and balanced diets.

"Good Nutrition" is defined as the process by which foods supply the substances called nutrients and energy needed daily for physical growth and repair. Nutritional needs are influenced by individual variables, environmental conditions, and a variety of other factors. For most people, good nutrition can be achieved by eating a balanced diet.

The balanced diet notion has been around for a long time, but its meaning is rather vague to most people. Basically, a "balanced diet" consists of a wide variety of foods which provide the necessary nutrients.

The Four Food Groups, or Basic

Four System, is commonly used for simplifying food selection to obtain a balanced diet. The Four Food Groups are: 1) milk products; 2) meat and protein foods; 3) vegetables and fruits; 4) bread and cereal products. Using this system, a person would select a certain number of servings (depending on age and other physical characteristics) from each group every day to obtain a balanced diet. The number of recommended servings is outlined in the accompanying chart.

A fifth category, called Other Foods, includes foods which contain mostly calories and few nutrients. These foods include fatty items such as butter, margarine, potato chips, mayonnaise, and sugary items such as cakes, candy, pies, soda pop, jelly and doughnuts.

Also included in the Other Foods category are spices, relish, catsup, and other flavor items. These foods are often referred to as empty calories because they have low nutrient density.

Other dietary considerations which should be included in a well-balanced diet are water, fiber, and calories.

Water is important for proper digestion and to maintain bodily functions. A person should drink four to six glasses of fluids daily. Extra fluids are needed to prevent dehydration during physical exertion and exposure to heat.

Fiber or bran, although not digested by the body, is needed every day for bulk and stimulation of the digestive tract. Fiber is readily available in raw fruits and vegetables and whole grain products.

Calories are units of energy necessary for physical growth and to provide energy to enable activity. Practically all foods supply calories. The main categories of nutrients which provide

calories are carbohydrates (starches and sugars), protein, and lipids (fats and oils).

Not everyone can achieve the optimum every day, but a person's health will not be endangered if, on the average, the diet is balanced. Health problems arise when a person consistently eats less than the minimum of servings over a period of time.

The practice of supplementing a poor diet with pills and other preparations does not take the place of a well-balanced diet. There are many little-known but essential "trace" elements that are found in basic foods but not yet marketed commercially.

Additionally, excess amounts of some nutrients, such as Vitamins A and D are toxic and can cause serious illness. Little is known about the effect of overdoses and interactions of some nutrients. Supplements therefore should be used only when a health professional advises it.

In Alaska many locally grown and traditional foods provide good sources of leader nutrients and can be clearly categorized into the Four Food Groups system.

Alaska's diverse game — caribou, moose, duck, seal, sea lion, whale, bear, ptarmigan, goose, bird eggs, porcupine, rabbit, squirrel, dozens of fishes and seafood — all fit into the meat and protein group and are excellent sources of protein, thiamin, niacin and iron.

Alaska's wild greens, such as sour dock, wild rhubarb, sedum, willow greens, sea asparagus, goose tongue, fiddlehead fern, are important sources of ascorbic acid or Vitamin C. These naturally fit into the fruits and vegetables group.

Certain wild grains and starchy roots, such as Indian rice and mashu roots are categorized as bread and cereals and help to provide some of the leader



nutrients thiamin, niacin and iron.

There are many Alaskan foods, however, which do not apparently fit into the Basic Four groups. For example, fish bones are excellent sources of calcium but do not exactly fit in the milk group. A regular diet of canned fish which includes the bones, then, would help supply dietary calcium even though a person consumes few milk products.

And although there are not many citrus fruits grown in Alaska, some ascorbic acid is available in animal livers, although liver is not usually categorized in the fruits and vegetables group.

Other examples include: bone marrow, which is very high in iron; stomach

contents of caribou, which are high in Vitamin A and riboflavin; caribou liver, which like all animal livers, is rich in protein, Vitamin A, iron and B-Vitamins, niacin, riboflavin, thiamin, as well as some ascorbic acid, Vitamin C.

Sea mammal oils, when properly stored, are excellent sources of Vitamin A and Vitamin D; fish liver oils are also high in Vitamins A and D; and the roots and seedlings of mousenuts contain some iron.

The mass media have brought about tremendous cultural transitions in Alaska, but the impact of Western culture on Alaskan nutritional status has not been totally beneficial. Although the importation of milk, bread,

vegetables, fruits, and better storage techniques have supplemented or improved the Alaskan diet in many cases, there also have been adverse side effects. Tang, Captain Crunch, Coke, Nestles chocolate bars, bubblegum, and uncounted varieties of sweets and sodas are rapidly becoming mainstays of the Alaskan diet.

As noted in the September edition of *Alaska Education News*, the substitution of these junk foods and empty calories for wholesome traditional foods has taken its toll, notably in the form of high incidences of dental decay and anemia.

Iron-deficiency anemia results largely because people cannot identify iron-rich foods and therefore do not incorporate them into a balanced diet. Tooth decay and obesity can result from the frequent consumption of sugary foods, as well as a deficiency of calcium-rich foods in the diet.

Nutrition education efforts in Alaska should focus on these gaps in knowledge. The learning problems and health defects which may result from a poor diet or iron-deficiency anemia can be avoided. Preventive education is effective.

Those interested in obtaining more nutrition education or ideas for improving the effectiveness of nutrition education programs, should contact the Department of Education school food service office or the South East Regional Resource Center.

FOOD GROUPS	Milk Products	Meat and Protein	Vegetables and Fruits	Bread and Cereals
RECOMMENDED NUMBER OF DAILY SERVINGS:				
Child	3	2	4	4
Teenager	4	2	4	4
Adult	2	2	4	4
Pregnant Woman	4	3	4	4
Lactating Woman	4 or more	2 or more	4	4

December 1980

## Parents pack a lot of brown bags for students

By Marguerite Stetson

A parent with only one child to pack lunches for, probably packs 175 lunches a year. If there are four children in the family, that parent is making approximately 700 bag lunches a year.

When school lunches are not available, or when parents find that they need to watch every penny of their food dollar, then they may wish to pack a brown bag for or with their children. Lunches are not snacks. They should be full meals that provide the kind of nutrients children need to get through the school day.

It is not economical to pack a small bag of potato chips and a can of soda pop. Not only are these items expensive,

but they are low in nutrition. And when there is a continuous shortage of essential nutrients, dental and doctor bills will go up—not to mention that attention spans and learning go down.

The lunch should include milk, which is often purchased at school for less money than a parent can pack the milk. Ideally, the lunch should include two servings of fruits, vegetables or both. Two servings of breads or foods that are higher in calories may be included in children's lunches.

Some good examples of foods that can be put in the lunch from the fruit and vegetable group are: carrot sticks, vegetable soup, dried fruits, apples, oranges, bananas.

From the bread group a variety of breads can be included as well as soda crackers or graham crackers or ready-to-eat cereals.

Typically, Americans eat enough meat group foods in their breakfast and dinner, so it is not essential that these foods be included at lunch; however, some low cost suggestions would be hardboiled eggs, peanut butter, tuna fish, bean soup, leftover meats, cooked chicken or ham.

There are other concerns besides nutrition about packed lunches. If the child's lunch will be stored in a warm classroom the teacher will need to make certain that the meat group foods are kept cold. Most of the soups should be



hot. A thermos bottle will provide the insulation for the hot soup. If meat group foods are put into the lunch while they are still frozen, they will help keep the rest of the lunch cold until time to eat.

Another innovative way to keep a bag lunch cold is to prepare frozen fruit salads in styrofoam cups. These cups can be tucked into a plastic bag along with a spoon. They will be just right to eat at lunch time, still a little crunchy and cold, and a nice change from the routine.

Since many children pack their own lunches, a teacher can help children learn a little nutrition while at the same time reinforcing math skills. The accompanying chart for planning a packed lunch can be used as an exercise for fifth or sixth graders. Ask the children to set up a chart with columns as shown for the various nutrients listed. (The nutrients are in percentage of U.S. RDA.)

The teacher or the children can do some research at the store to find the cost for the amount of each food that is listed on the chart.

These are the directions for the activity:

- Transfer all the information about each item to your chart and add the costs, calories, and each nutrient.
- How many students had all the nutrients they needed in the amounts they needed?

- Who had the most expensive lunch? lowest cost lunch?
- What kinds of food make lunches more expensive?
- What kinds of food contribute to meeting the nutrients needed;
- What kinds of food contribute only calories?

Here are the nutritional requirements of children aged 8-12: Calories, 2400; Protein, 65; Vitamin A, 80; Vitamin C, 70; Thiamin, 80; Riboflavin, 80; Niacin, 50; Calcium, 90; Iron, 80.

If lunch should provide one-third of the nutritional requirements for a 12-year-old child, figure one-third of the day's calories, protein, etc. Ask children how their selections compare to one-third of a day's nutrition?

For a listing of additional foods shown with their percentages of nutrients and calories, you may wish to order a copy of *Nutrition Labeling—Tools for Its Use*. It costs \$1.15, and may be ordered from Cooperative Extension Service, University of Alaska, Fairbanks 99701.

Additional ideas on packing a lunch are found in a bulletin entitled "Pack A Lunch Your Kids Will Love." This may be ordered free, in single copies, from the same source.

Stetson is a nutrition specialist at the Cooperative Extension Service of the University of Alaska-Fairbanks. She also is an advisory council member to the Nutrition Education Training Program.

## Nature provided Alaska natives with healthy diet

By Shirley M. Kendal

Tlingit Home Economist

*Nutrition: The science of balanced diet to promote health in human beings.*

I was more than impressed with what scientists have been able to do in this field. They have been able to figure out what nutrients are important to our bodies and not only what the food sources are, but also the amounts of nutrients we need every day to be healthy. This was presented as the Basic Four food groups (meat, milk, vegetables and fruit, and bread and cereal), a unique and simple plan that can be followed easily with little instruction.

How then did my parents and ancestors stay so healthy without a pattern like this to follow? I was raised on traditional foods and was very familiar with the type of foods used by my tribe and I became very curious.



I put myself to work on the task of dividing the traditional foods of my tribe into the Basic Four food groups. Frustrations! It did not work! I could stretch some of the foods to fit into the Basic Four plan, but there were very large gaps, and the meat section was overloaded.

I abandoned the plan and decided to look at the nutrients needed under each food group. What nutrient did the scientists say was important in each category and what is the food source?

### Meat and Meat Substitutes

The meat and meat substitutes category supplies protein, thiamin, niacin and iron. Meat was our staple and was in ample supply, so we did not need meat substitutes. The meat

CLASSROOM EXERCISE										
SELECTED FOODS	Cost	Calories	Protein	Vitamin A	Vitamin C	Thiamin	Riboflavin	Niacin	Calcium	Iron
Baked beans (8 oz.) cold		260	20	4	—	10	6	4	10	20
Egg, hard		80	15	10	—	2	8	—	2	6
Apple, 1		80	—	2	10	2	2	—	—	2
Banana, 1		100	2	4	20	4	4	4	—	4
Orange, 1		60	2	6	110	8	2	2	6	2
Canned peach snack pack		200	2	20	15	2	2	8	—	4
Canned peaches one serving		200	2	20	15	2	2	8	—	4
Raisins 1½ oz.		130	2	—	—	4	2	—	2	8
Carrots, 1		10	—	60	4	2	—	—	2	2
Biscuit, 1		100	4	—	—	6	4	4	4	8
Graham Crackers, 2		60	2	—	—	—	2	—	—	2
Muffin, 1										
Blueberry		100	4	2	—	6	6	4	4	10
SWEETS										
Fig bars, 2		100	2	—	—	—	2	—	2	2
Chocolate Chip cookies, 2		105	2	—	—	2	2	2	1	5
Ding-Dong, 1		160	4	2	—	—	2	—	4	2
SANDWICHES										
Peanut butter		230	16	—	—	14	10	18	—	20
Tuna		275	38	1	—	13	11	33	—	20
BEVERAGES										
Apple Juice 6 oz.		90	—	—	3	1	1	—	1	6
Kool Aid, 1 c.		100	—	4	15	—	—	—	4	—
Milk, 1 c.		150	20	4	4	6	25	—	30	—
Orange Juice 6 oz.		190	3	8	128	8	1	3	1	4
Pop, 12 oz.		309	—	—	—	—	—	—	—	—



from the land animals was smoked, dried and preserved. The bones were cracked and stewed and the children were encouraged to eat the bone marrow.

We used to go to the dinner table with a fresh piece of wood, so we could pound the bone on it to get the marrow out. The marrow is an excellent source of iron.

The fish were stewed with the heads on, or baked. When we caught a large halibut, the meat was cut into thin strips and smoked and dried and cooked for a stew later. These are but a few examples, but it was obvious that because of all these things people did, they could easily meet the daily requirement.

#### Milk and Milk Products

Milk and milk products yield an important nutrient, calcium. Traditionally in my culture, milk was reserved for infants and toddlers. After a child was weaned, milk was not available from any other source. But it was the practice of the Natives to cook all the bones with the meats and fish. We were encouraged to chew all the little bones, which are high in calcium content.

Shellfish, another source of calcium, was used in large amounts throughout the year. The Natives also did a very important thing: they added seal oil to all fish soups, dried fish was dipped into seal oil and the oil was added to fish if it was baked or prepared in any other way.

I feel this is important because seal oil contains Vitamin D. Vitamin D today is added to milk because it regulates the use of calcium and phosphorous by your body.

It was also the practice of the Tlingits to use seal fat as a pacifier for infants. This was a source of Vitamin D. Scientists also say the human body has the tendency to absorb all available calcium if there is strong need for it. From the pictures taken of the Natives in the early days, there didn't appear to be a problem with rickets, or other bone deformities caused by lack of calcium in the diet.

#### Fruits and Vegetables

Fruits and vegetables were traditionally rare. I could name on one hand the number of plants available, and then they were available only in the spring.

Vitamins A and C are named as the important nutrients needed. The Vitamin C food source for the Natives was, of course, berries. We have access to a tremendous variety and amount of berries that were gathered and preserved for the winter. But then the scientist also tells me that Vitamin C is very fragile and is needed every day.

The enemies of Vitamin C are air, water and heat. Since the berries were usually eaten uncooked, that didn't appear to be a real problem. My ancestors were one step ahead of the scientist in saving this important vitamin; they preserved their berries in oil and kept them out in the cold. They served the berries with some of the oil, and if water was added before serving the juice was also used.

Vitamin A not only comes from green and yellow vegetables, but from some meat sources and egg yolks. Salmon and salmon eggs, wild eggs and the yellow berries contain this impor-

tant vitamin, which is present even after cooking and drying the foods.

The organ meats also contain Vitamin A, and the seal blubber, seal oil and animal livers are sources. The contents of the rumen in the deer family was usually dumped, but the stomach lining was eaten, and since it was not usually scrubbed and bleached as is the tripe you see in the market, the Vitamin A was not wasted.

In the spring we spent hours in the nearby woods eating all the sprouts that we could get and we gathered other plants as they became available.

#### Grain Products

Traditionally we had no food that could fit into the grain products category. But what is it that we need from this type of foods? These furnish B-Vitamins, especially thiamin and niacin and iron.

I looked at some lists of nutrients sources. There is a strong indication that we were able to meet this need because we ate almost all parts of the animal. It is known that the organ meats of domesticated animals are excellent sources of B-Vitamins and iron. We can assume that the same nutrients appear in wild animals as well. But keep in mind we ate far more parts of the animal than have been chemically analyzed in the domesticated animal.

In addition, sea mammals such as seal, whale and orca have far more iron in their meat than land animals. These foods supplied us with all the B-Vitamins and iron we needed to stay healthy.

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February 1981

## *Good health requires a good life style*

By Len Tritsch

Living a healthy lifestyle requires a person to develop attitudes and skills to control stress, implement good nutritional practices and exercise properly. To address and change established habits is often very difficult and it requires time, energy and discipline.

Individuals cannot control all of their environmental factors, but they can be responsible for their lifestyle. Overcoming some of the most common habits could greatly reduce

many diseases and complaints. Those most prevalent practices contributing to ill health are smoking; lack of exercise; misuse of alcohol; over-eating; excessive consumption of fats, salts and sugar; and drug abuse.

The following are actions which you as an educator can take to establish health as a societal norm:

- Educate yourself and your staff by:
  - attending a Health Education Conference with a team of staff and community members;

- reading the book "Fit or Fat" by Covert Bailey (\$3.95);
- reading the Surgeon General's report, "Healthy People";
- asking for assistance in setting up a health promotion/well workshop and/or inservice;
- Obtain information from districts that are implementing staff programs.
- Educate your students by:
  - having you and your entire staff model positive health behaviors;



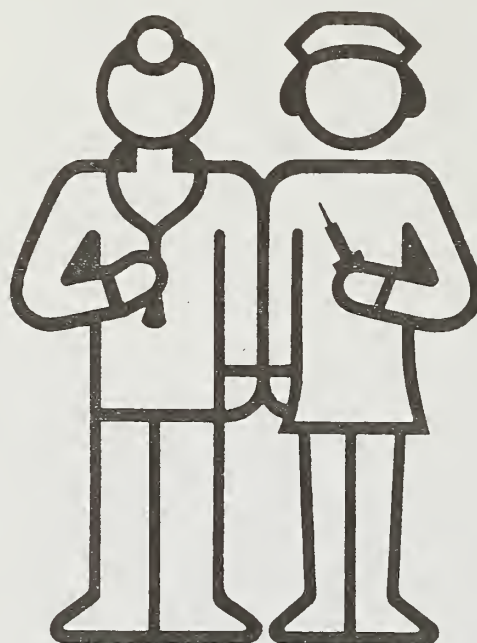
- implementing an "action oriented" program concerned with pertinent health issues;
- involving your community in your health program.

Like it or not, "What You Are Is What You Teach." Your actions speak louder than your words. If research is correct in stating that 85 to 90 percent of what we communicate is nonverbal, it is very important that your entire school, including the lunch program, must model positive health behavior if we expect students to buy the information presented. The school districts in Oregon are finding that modeling does make a difference.

For some time many doctors have been saying that an annual physical examination is a waste of time and money. Recently I read a news release entitled "Lifetime Health Monitoring May Replace Annual Physical." The following is a quote from the July 29, 1980 Gannett News Service, Washington, D.C.:

WASHINGTON—The annual checkup, long held to be a guarantee of good health, may go the way of the doctor who makes house calls if an unusual insurance company - sponsored study proves its point.

Also heading for extinction may be such traditional procedures as



proctoscopies, cardiac stress tests and even some blood tests.

In their place instead will be a lifetime health monitoring program—a sort of comprehensive laundry list of health care procedures custom-made to fit every different age group. If it works, it could make for a healthier population and potentially save health insurance companies a bundle . . ."

This has great implications for

the content and methods used in teaching health concepts.

The implementation of a total health program to include fitness, nutrition and stress management is an investment in the human resource. A district maintains its computers, its automobiles and its physical plant. We would assume that it is only common sense also to maintain its most valuable asset—its human resource.

Many times an error is made in assuming that a great percentage of people effectively manage their own health. It is puzzling to me that some people think nothing of spending \$300 on a suit of clothes but will not spend one-tenth of that amount on appropriate athletic gear or spend thirty minutes three days a week on exercise to enhance their physical well-being.

The trouble is that the great majority of people rely too much upon the wonders of modern medicine and too little upon themselves.

*Len Tritsch is a health education specialist of the Oregon Department of Education. Tritsch will present a workshop entitled "A Lifestyle for Wellness" at the NEA Teachers Conference in March. His experience in health education spans 32 years in numerous national, regional and state health education programs.*

March 1981

## Iron deficiency is common malady across the country

By Elizabeth D. Nobmann

Iron deficiency is the most commonly recognized nutritional deficiency in the United States today. It is especially common among children because of the large iron needs of rapidly growing bodies. Therefore, infants, preschool children and teenagers are most likely to be affected. How does it affect them? And what can be done about it?

What happens when a child doesn't eat enough iron to meet his body's requirements? The most familiar result is iron deficiency anemia. The physical signs of anemia include fatigue, listlessness, pallor, and breathlessness. This is caused by reduced levels of hemoglobin, the iron-containing protein in the

oxygen-carrying red blood cells. But anemia is a symptom that develops late in iron deficiency.

Other parts of the body may be affected before anemia develops. Enzymes, cytochromes (electron transporters in cellular oxidation) and other proteins that help the body use oxygen may be affected. Storage iron will also be reduced before the hemoglobin level drops. So children can be iron deficient before they become anemic.

While most sources agree that iron deficiency reduces work output, there is disagreement concerning other possible results of iron deficiency.

At least four different research

groups have published results linking iron deficiency with learning disorders. They describe anemic children with decreased attentiveness, narrow attention spans, perceptual restrictions and lower scores on intelligence and vocabulary tests, including the Iowa Test of Basic Skills. Inattention, hyperactivity, and conduct disturbances, as rated by teachers, are also described. If the results of these studies withstand further testing, the findings have considerable bearing on what happens in the classroom.

While there are many questions to be answered about the effects of iron deficiency, it seems most prudent to encourage children to get the iron they



need along with all of the other essential nutrients for maintaining healthy growing bodies. What can be done to improve children's iron nutrition? Here are four steps:

1. Eat iron rich foods. This is familiar advice that has been given for years. What may be new about his advice is that we now know certain foods contain a form of iron known as heme iron, which is absorbed better than other forms. Heme iron is found in animal tissues such as meat, fish and poultry. The second form of dietary iron is nonheme iron.

The iron in grains, fruits and vegetables is nonheme iron. It is not as well absorbed, but more than half of the iron in the diet is nonheme iron. Therefore, both forms are important.

2. Eat foods that promote iron absorption. Nonheme iron absorption can be improved by two dietary factors. One is ascorbic acid (Vitamin C). The other is an unidentified factor present in meat, fish and poultry called MFP factor. Depending on the amount and type of foods eaten at any meal, the absorption of nonheme iron can be as much as eight percent or as little as three percent.

Nonheme iron can be made highly available by combining nonheme iron rich foods with a normal three ounce serving of meat, fish or poultry (for the MFP factor) or by eating any good source of ascorbic acid.

A glass of orange juice, for example, will provide more than enough ascorbic acid. A combination of meat and ascorbic acid will do the same thing. Smaller amounts (less than an ounce of meat or one-quarter cup of juice) reduce the nonheme iron absorption.

The bottom line is, eat meats or ascorbic rich foods to help absorb the nonheme iron in your foods. This also means eating foods at the same time rather than separately, so that they will be digested together and increase iron absorption.

3. Know what you need to eat to stay healthy. Many children lack the knowledge to make good food choices. A recent study of Southwest Alaskan teenagers revealed a surprising lack of knowledge concerning iron sources. Less than half of them could name a food high in iron. One would expect such information would be offered through health education, science, or home economics lessons. If it is, then the students' retention seems to be low.

Therefore, more and/or better nutrition education opportunities should

occur. These can be incorporated in a variety of subject areas. For example, the calculation of available iron in the diet can provide an interesting mathematics exercise. (Learning activities have been developed and are available from the Alaska Area Native Health Service, Nutrition Section, P.O. Box 7-741, Anchorage, 99510).

The school lunch program provides another learning opportunity to apply classroom knowledge to what the students actually eat. So use the lunch program as a laboratory as well as a time to eat.

4. When appropriate encourage the use of traditional Alaskan meats. Many of the traditional Alaskan meats—birds, land mammals, and especially sea mammals, are excellent sources of iron. When these foods are regularly consumed, the iron content of the diet is high. But as traditional foods are replaced by beef, chicken and other lower iron content meats, or by soda pop and sweets, which have no iron, diets suffer. So when traditional foods are available encourage their use.

In summary, iron deficiency results in physical symptoms of fatigue and listlessness that affect a child's ability to learn. Some researchers propose that there are additional effects of iron deficiency which actually alter brain and central nervous system functions resulting in reduced attentiveness and lower test scores. The fact that it is such a widespread deficiency is cause for concern and action.

The potential for developing iron deficiency can be minimized by eating foods rich in iron, promoting iron absorption by eating nonheme iron rich foods in combination with meat, fish, poultry, or ascorbic acid rich foods, and providing children with the knowledge and motivation to make nourishing food choices. If we all follow these guidelines, iron deficiency could be significantly reduced and Alaska children would be healthier for it.

*Elizabeth D. Nobmann is the chief of the nutrition section of the Alaska Area Native Health Service.*

—April 1981—

## Students can help decide school lunch menus

By Kathleen Schnick, R.D.

The components of the school lunch menu are regulated by the federal government under the guidelines for the National School Lunch Program. But within these guidelines what comprises a good lunch is determined by the students' food preferences.

In order to conform to the school lunch meal pattern, each lunch must consist of two ounces or more of a meat or meat substitute, three-fourths cup, or two or more fruits and/or vegetables, one serving of bread, and eight ounces of milk.

The components are based on the four food groups, not on specific levels of nutrients, although by following the guideline and by incorporating a variety of foods, one-third or more of the students' daily nutrient needs will be met.

Students at any level can work within these guidelines to create school lunch menus tailored to their tastes and food preferences.

By enlisting the help and suggestions of a class of students each month, interest in the lunch program and

awareness of the meal requirements can be brought into focus.

If students are reminded of cost constraints, eye appeal, using a variety of foods, avoiding repetition of the same or similar food items, incorporating vegetarian dishes, the holding capacity of the food, and ease of service, they are ready to suggest their new and old favorites for the school lunch menu.



Surprisingly enough when students do write the menus they don't always include their all-time favorites of hamburgers, pizza and tacos. The younger



students are apt to include some casseroles on their menu or a soup and sandwich day. Older students more frequently suggest spicy ethnic foods, with sandwiches at the top of their list.

New foods that have been served in the Matanuska-Susitna Borough School District at the suggestion of the students are clam chowder, peanut butter chocolate chip cookies, chili with hot dog slices, and more frozen vegetables and fresh fruit wedges. Although the students most often suggest foods that regularly appear on the menu, it's fun for both the food service staff and the students to try some new foods.

The students take great pride in seeing

their own menus appear both on the written menu and in the lunchroom. Lunch program participation is apt to be increased at the school that wrote menus for the week.

The students gain a better perspective of what the lunch program is all about plus they gain a feeling that this is really their program. They become aware that a great deal of planning and preparation go into the meals long before the students see the food on their trays.

*Kathleen Schnick is the school lunch coordinator for the Matanuska-Susitna Borough School District.*

for northern Alaska, is playing a leadership role in facilitating public and parental involvement in curriculum development.

NAHRA was one of the major forces behind the Health Education Advisory Board in the beginning, and it has continued to provide considerable staff and volunteer support for the effort. Recently, the school district contracted with NAHRA to conduct a media campaign to increase public awareness about the need for school health education.

In conjunction with that project, NAHRA is also training health education advisory board members and members of the Parent Health Advisory Board to lead discussions about health education with the parent/teacher groups. A

districtwide parents advisory council has also been formed.

The Fairbanks curriculum contains the basic components of most comprehensive health education programs: nutrition and physical fitness; dental health; mental health; substance use and abuse; growth and development; safety and first aid; disease prevention and control; and consumer health. However, the Health Education Advisory Board decided early on to shape the curriculum to the needs of northern Alaskans. The program follows a decision-making model, with the aim of teaching children to think and make responsible decisions for their and their community's health.

*Diadre House is health curriculum specialist for Fairbanks North Star Borough School District. Sherry McWhorter is health resource specialist for the Northern Alaska Health Resources Association.*

May 1981

## Health education given attention in Fairbanks

By Diadre House & Sherry McWhorter

The Fairbanks North Star Borough School Board passed a milepost recently when it formally endorsed development of a comprehensive K-12 health curriculum.

As evidence of that endorsement, the school board allocated funds for a full-time health education curriculum specialist.

Completion of the health curriculum for grades K-6 is expected this spring. The curriculum is to be introduced in 11 elementary schools during fall 1981, and expanded to all 18 Fairbanks elementary schools in the fall of 1982.

Secondary school health courses are to be piloted during the 1982-83 school year.

Development of a health curriculum in Fairbanks has been a slow, careful process representing almost three years of effort by the Northern Alaska Health Resources Association (NAHRA) and numerous volunteers on the Health Education Advisory Board. The process grew from community response to a combination of perceived needs and clear, documented health-related problems.

The advisory board was created as a mechanism to bring involved and concerned parents, teachers and health care providers together around the issue of health education. It has become the core of community support for the school district's efforts.

At this point, the K-6 health curriculum consists of a set of learning ob-

jectives and sample lesson plans. Key teachers from the 11 schools which will pilot the curriculum next fall were provided three days of inservice training in March and an additional two days in April. These teachers will be responsible for testing lessons this spring, for helping to inform and train other teachers in their buildings in use of the curriculum, and for advising the school district about the quality and comprehensiveness of the draft curriculum.

Another key element in the success of this comprehensive school effort is the support of parents. The Northern Alaska Health Resources Association (NAHRA), as the health systems agency

### Did you know ?

Students involved in the Student Health Education Forum recommend that school districts provide information on:

- diet pills
- fasting
- vitamin pills
- junk food
- caffeine
- traditional foods
- diabetes
- anorexia nervosa
- obesity
- affects of smoking
- sugar
- natural foods



## Study explores eating habits of Alaska's school teachers

Eating proper quantities of food known to promote good health is not just a matter of keeping fit. For teachers, it may be an opportunity to model exemplary behavior for students.

How much good, nutritious food are teachers in Alaska eating? That is a question Marguerite Stetson, nutrition specialist with the University of Alaska Cooperative Extension Service, has been trying to answer over the last four years. In her efforts to promote nutrition education throughout the state, Stetson works with teachers and other citizens, teaching them how to analyze their own diets and helping them prepare to teach nutrition in the classroom.

So far Stetson has gathered 116 reports of 24-hour food consumption from Alaska teachers. The reports show the average teacher in the study consumed 1.68 servings of milk, 2.57 servings of meat, 3.84 servings of vegetables and fruits, 3.24 servings of breads and cereals, and 3.12 servings of other foods during a 24-hour period.

Stetson then used a scoring system to determine the quality of the teachers' diets. Scores in the system, which has been validated under the U.S. Department of Agriculture Nutrition Education Program, range from 0 to 100, with higher scores indicating a higher quality diet. A score of 100 represents USDA standards for a minimally adequate diet, which would include two servings from the milk group, two of meat, four of vegetables and fruits and four of breads and cereals.

Teachers' scores ranged from 21 to 100, but only 14 of the 116 teachers scored below 50. The average score for teachers was 74.8. That's not the ideal daily minimum, but it's probably better than the average Alaskan's diet.

Stetson also used the scores in analyzing which kinds of foods the teachers' diets were lacking. She divided the scores into groups, then analyzed servings for each group. One group included scores 21 through 49, another 50 through 79, the next 80 through 89 and the highest 90 through 100.

The median score of the top quality group, which included 31 of the 116 teachers tested, met the recommended amounts of servings in each of the four food groups. All groups met or exceeded meat group servings.

Teachers in the two groups with quality scores under 79 consumed an average of one-third of a can of soda pop per person. Soda pop consumption was half that in the group that scored between 80 and 89 and even less in the group with the top quality diet. At the same time, the top group showed the highest per capita consumption of beer and wine.

Further findings about Alaskans' food habits may become obvious as Stetson's study progresses. Meanwhile, teachers interested in evaluating diets and teaching nutrition in the classroom may contact Stetson or home economists working with the cooperative extension service throughout the state. Stetson is located in Fairbanks at 474-7254.

Basic concepts students should be aware of concerning nutrition:

- 1) Nutrition is concerned with the way foods and food elements are used by the body.
- 2) Nutrition is important in the everyday functioning of an individual.
- 3) Individuals throughout life require the same nutrients, but in varying amounts.
- 4) Good nutritional health depends upon diet, physical condition, heredity, physical environment, emotional climate and food preparation.
- 5) Food processing and preparation (commercially and at home) influence the nutritional value and safety of foods.
- 6) Nutrition is a significant factor in weight control.
- 7) Dietary fads and misconceptions can be detrimental to health.

## Hepatitis B a serious threat to Alaska youngsters

By Mary Coner Huelsman

Recent media coverage has focused public attention on near epidemic incidence of Hepatitis B in the Yukon-Kuskokwim area of Alaska. Statistics quoted by the Alaska Area Native Health Service show that Alaska natives living in these villages have been infected at rates close to 30 percent of the population. This is higher than any other population group in the United States.

Children under 10 years of age appear to be especially vulnerable. In some villages up to 50 percent are chronically infected with the disease. Overall 17 percent of the children in the area have a chance of becoming infected and 24 percent of children under four years of age who are infected will become carriers. Children born to infected mothers or living with infected or carrier household members are at greatest risk.

Teachers and others working with young children in any part of Alaska need to know more about the disease, its symptoms, communicability, and what prevention measures can be taken.



### What is Hepatitis B?

Formerly known as Serum Hepatitis, the virus is present in body fluids and secretions of infected people and chronic carriers. It causes swelling and tenderness of the liver.

The most common symptoms include fatigue, mild fever, muscle or joint aches, skin rash, nausea, vomiting, loss of appetite, vague abdominal pain, and sometimes diarrhea. The disease is often mild and asymp-



tomatic in preschool children. It can appear to be a flu, so many cases go undiagnosed.

#### **What are the long term effects?**

The after effects of the disease are often more serious than the earlier HBV infection itself.

Polyarteritis Nodosa (PAN) is a serious inflammation of the arteries which can follow an acute HBV infection.

Alaska Eskimos have the highest recorded PAN rate in the world, 15 to 20 cases a year per 100,000 total population. The disease has a 30 percent mortality rate, and those who survive require intensive toxic drug treatment for up to three years.

Many chronic carriers develop liver cancer. Alaska Eskimos have the highest rate of this cancer in the U.S., with one half under 30 years of age.

Estimates state that 20 to 25 percent of the carriers will develop chronic active hepatitis with cirrhosis, a progressive liver infection which may eventually impair liver function and cause death.

#### **How is it spread?**

HBV appears to be highly communicable only within more susceptible populations. Alaska Eskimos, people living in Taiwan and China, West Africans, and Blacks in inner cities have a higher rate of infection than any other groups.

Hepatitis B virus is present in blood, saliva, semen, and menstrual blood and other body fluid. It may be transmitted by blood transfusion, kissing, sexual contact, through cuts or open sores, and by puncturing of the skin with contaminated instruments such as those used for piercing ears, drawing blood, or dental drills.

Although the disease is infectious, it is not acutely contagious. Frequent contact over a long period of time seems to be a necessary factor, and it is unlike chicken pox or mumps in which usually only one contact is necessary in order for the disease to be acquired.

#### **What prevention measures can be taken?**

The best way to prevent contraction of Hepatitis B is vaccination. Persons who have never had the disease can be inoculated with Heptovax, a vaccine that is highly effective and safe. There are almost no side effects; a small percentage of the recipients have had mild site reactions.

Vaccination priority will be given to newborns whose mothers are carriers or who live in villages where the prevalence is five percent or higher; residents of villages where the infection rate is five percent or higher; health care employees; and those at risk in households with infected persons. Vaccinations will be completed in the Yukon-Kuskokwim area in the next six to eight months.

Because the vaccine is effective only for someone who has never had the disease, people will first be tested to see if they have been exposed to it. Other tests to be conducted will show if a person is a carrier or in the beginning stages of primary liver cancer.

Other areas scheduled to receive testing and vaccine after Yukon-Kuskokwim are Bering Strait, Kotzebue, Dillingham, the Interior, and then the rest of Alaska.

Certain measures should be taken at home and school to prevent the spread of Hepatitis B. Keep wounds clean and covered. Always wash your hands after touching a wound or open sore such as impetigo. Store toothbrushes so that they do not touch each other. En-

courage children to be sure to use their own.

At school, label toothbrushes with each child's name, and store them in name labeled holders. Make sure that children do not share the same eating utensils or glasses. Encourage children to eat a piece of food or gum all by themselves instead of sharing it back and forth.

The Hepatitis B virus has been picked up on tables, walls, etc. Clean tables, chairs, toys and much handled surfaces with strong detergent and water. Detergent has been found to be more effective than alcohol.

#### **For further information**

A 30-minute videotape is available from both Regional Native Corporations and the Alaska Native Health Board, 1689 C. St., Suite 230, Anchorage 99501. The program describes Hepatitis B, its effects, what has been done, and plans for the future.

The Alaska Native Health Board also has a pamphlet for distribution.

*Mary Coner Huelsman is a consultant with the Child Development Certification program in Alaska.*

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May 1982

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## **Athletes need calories, water**

By Debra Thumser

Do athletes require special diets or special foods? Generally speaking, the answer is "no." The nutritional needs of an athlete or a physically active person are similar to those of an inactive person. Both require the same Recommended Dietary Allowance (RDA) levels of nutrients for their particular age and sex.

The athlete, however, does have two very special needs to consider: the increased need for calories during training and competition, and the regular intake of water. The need for more calories is to meet the increased energy demands placed on the body during physical activity. The need for water is to prevent dehydration.

Foods for everyone should be selected from the four food groups (grain, meats and meat alternatives, dairy products, fruits and vegetables) to meet daily nutrient requirements. But after an athlete has consumed the recommended amounts, what then? Where do the extra calories come from?

The best sources of extra calories are complex carbohydrates from grains, cereals, breads and pasta, and fruits and vegetables. Extra servings from the meat and dairy groups would also provide additional calories as well as the nutrients iron, protein, and B vitamins.

But water is the nutrient most often overlooked by athletes and physically active people. Athletes must drink extra water to avoid dangerous body dehydration.

About two-thirds of the total body weight in humans is water, and the body must maintain its water levels within a limited margin. If it loses three percent of its body weight, its physical performance will be negatively affected. A loss of 10 percent will produce severe dehydration; a 20 percent loss is fatal.

All human beings must replenish water continually. We can survive without food for up to 30 days but only five to six days without water. Sedentary adults need to replace two and a half quarts of water daily, since practically all chemical processes in the body require water.



Athletes should force themselves to drink more water than they may want, since the thirst mechanism does not communicate accurately the amount of water lost through sweating. If voluntary replacement is relied upon, it would replace only one-half to two-thirds of the water lost during competition. Full replacement could take as long as 24 to 36 hours after an event.

An athlete should drink about eight ounces of cool water 10 to 15 minutes before an event. During the event, a person should drink one half cup of cool water every 15 minutes or at each water station that comes along, then continue to force water and fluids after the event has ended. Athletes and coaches should not forget water during practice and training.

To determine the amount of water lost during practice or competition, the athlete should weigh before and after the exercise session. The difference between the two weights should be replaced with fluid. Two cups of fluid are needed to restore one pound of body weight lost. If two pounds are lost, then four cups of fluid are needed.

The fluid consumed just before an event should ideally leave the stomach as fast as possible. This is to avoid the uncomfortable feeling of participating with a full stomach. In addition, an increased exit time would provide a fluid resource during actual physical exertion to help reduce the risk of overheating.

The fluids consumed should be cool, since water passes through the stomach more rapidly between the temperatures of 40 and 50 degrees Fahrenheit.

A sugar solution of less than two percent will empty much faster than one of a higher concentration. Popular athletic beverages often contain more than two percent sugar, which is too sweet for effective rehydration in warm weather. If used, these beverages should be diluted as follows:

- 1 part Gatorade to 1 part water
- 1 part fruit juice or soda to 2 parts water

An athlete should realize that carbohydrate and water needs may vary under different conditions. For example, on a hot day a runner may have a greater need for water replacement than for carbohydrate supplementation. Cold weather on the other hand, places little demand for water replacement, so instead an athlete may benefit from a higher percentage of sugar in a pre-event drink.

Drinking large amounts of beverages

containing caffeine is not recommended before competition. These fluids may act as a diuretic, robbing the body of valuable fluids needed during the event. Alcohol is also a dehydrant as well as a depressant and should be avoided in fluid replacement. For athletes and non-athletes, water is still the best and cheapest fluid!

Are salt tablets needed by athletes? For most athletes, salting of food at each meal will meet sodium requirements. If sweating is profuse, accompanied with a weight loss of two pounds, a one to two gram sodium loss may be experienced. Since the average well salted meal contains three to four grams of sodium, this loss can easily be replaced.

Salt tablets are also not well tolerated by most individuals, and they increase the body's demand for water when it is already high enough due to the physical exertion. It is best to avoid taking them at all.

Other supplements promoted to improve physical performance and provide a "winning edge" are protein and vitamin and mineral supplements, all with the theory that "if a little is good, more would be better." The body re-

quires a certain amount of protein for replacement of body tissue, with extra protein being used for energy. But foods high in protein are usually expensive, and protein is not as efficient in producing energy as carbohydrates. Excess protein also places an increased demand on the liver and kidneys during metabolism.

Using vitamin and mineral supplements excessively may also be expensive and dangerous. The body excretes the excess of most water soluble vitamins, resulting in "very expensive urine." Fat soluble vitamins are stored in the body and may accumulate to toxic levels, causing health problems or other complications.

The indiscriminate use of any dietary supplements or special foods may create unnecessary handicaps or health problems. These nutritional "ergogenic" or work-enhancing aids are also very expensive. Athletes would do best to concentrate on a varied diet to make fullest use of the natural strengths of their bodies.

*Debra Thumser is a nutrition consultant for the Washington State Dairy Council.*

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October 1982

## *Nutrition education programs available for Alaska*

By Glen Ray

The Nutrition Education and Training Program (NETP) is concerned with raising the health status of Alaskans through improving nutrition education in the schools. The program creates and supports both materials and activities to help Alaskans make choices that will contribute to improving their health.

A federally funded program, NETP has functioned in Alaska since 1978. The program's activities are based on identified nutrition-related health problems and the educational needs of students, teachers and food service workers.

NETP is guided by an Advisory Council comprised of 14 educators, school personnel, other professionals, and community members. It is coordinated by Ruth Benigno of the Department of Education's School Food Services unit and facilitated by the South East Regional Resource Center. In the program's statement of philosophy, developed by the Advisory Council in 1981, nutrition is recognized as an inte-

gral part of individual health — and thus, an important part of a comprehensive health curriculum in schools.

The Advisory Council recognizes that the food choices individuals make are not based on knowledge alone. Attitudes, experiences and social factors also influence food choices. For those reasons, the goals and activities of NETP are multi-dimensional, incorporating not only accurate information but also decision making skills and primary food experiences.

NETP has been responsible for a number of projects: support of "Food For Thought," a nutrition education program for early childhood through grade 12 developed by the North Slope Borough School District; creation and distribution of a teachers' guide for



service workers interested in being involved in nutrition education. This year NETP also has begun a mini-grant program to support educational activities that improve nutrition behaviors and the health status of the community.

The recipients of this year's grant awards are:

- Anchorage School District — to help implement a nutrition education curriculum;
- Bayshore Learning Center, Anchorage — to establish a nutrition education program using "Food. . . Early Choices";
- Fairbanks North Star Borough School District — to purchase support materials for a nutrition component of a health education curriculum;
- Haines Borough School District — to implement nutrition education in health classes;

• Juneau Borough School District — to develop an educational unit on "Nutrition and Cultural Values of the Native Foods of Southeast Alaska";

• Petersburg Day Care Center — to implement a program to educate working parents, their children, and members of the community in basic nutrition and healthy eating habits;

• St. Ann's Day Care Center, Juneau — to help children and parents make responsible decisions about nutrition.

For more information concerning free school inservice programs, free copies of *Reading Writing and Smoked Salmon* and other NETP programs, contact Glen Ray, South East Regional Resource Center, 429 "D" Street, Suite 306, Anchorage 99501.

attempt to solve societal problems such as bankruptcy, overextended credit, and overdrawn checking accounts through their programs. These and other curricular areas seek to foster the development of skills such as cognition, analysis and application that will equip students to write letters, speak to others, or balance their checkbooks.

Health educators, on the other hand, often feel that they can solve global problems through their programs. To say that health education will reduce teenage pregnancy and alcoholism, or reduce venereal disease, is to doom programs to failure. There are too many intervening factors associated with these problems to try to solve them through education alone.

Health education does have its place in the school curriculum. Health-related skills are important to all of us. They belong in our life repertoire along with language skills, mathematics skills, leisure skills, art skills, and physical skills.

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November 1982

## *Does nutrition education try to do too much?*

By Carolyn F. Hoover

Recently, a fifth grade teacher in Fairbanks reported the results of her annual nutrition unit. When examining the 24 hour food recalls from before and after the unit, she discovered that her students still preferred chocolate cupcakes to green peppers.

Although the students' cognitive scores had improved, the teacher was dismayed that their behavior had not. "Look at these 'improved' nutrition scores!" she commented, "I feel as though I'm beating my head against a stone wall."

She was expressing feelings of dismay and failure because this year's results are no different from those of the previous seven years.

### **Are we beating our heads against stone walls?**

More seriously, some teachers may speak sadly of the death of a young boy in a preventable snowmachine accident after he had received snowmachine safety in a health class at school. Still other teachers shake their heads in frustration when a teenage student is implicated as the cause of death in a fatal traffic accident; the student had been driving under the influence of

alcohol, and yet had received extensive alcohol awareness training.

Are we indeed beating our heads against stone walls? We may need to reevaluate our purpose in order to answer this question. Part of the reason for the head-banging is that we have more than likely set our goals too high, thereby dooming ourselves to frustration and failure.

As educators, we direct our efforts toward improving the quality of our students' lives. We do this by teaching them the *skills* necessary to survive in our society. We are increasingly aware that the subjects we teach are not nearly as important as the thought processes we teach.

It would seem, then, that health education has become too subject-oriented.

When we look at some of the overall goals and objectives for health, we can see why, especially when we compare them to goals in other areas.

### **Health education has become too subject-oriented.**

Very few language arts curriculum writers set reduction of illiteracy rates as their primary goal. Few mathematics and economics curriculum specialists

### **... behavior and choices are difficult to control.**

Because we live in a world of constant change, we must be prepared to assimilate and store vast amounts of information every day. No one piece of information is separate from any other. The process-oriented school curriculum recognizes this, and seeks to develop analytical thinking skills in all the varied "subject" areas. Ideally, these should be integrated and continually inter-related to one another.

All curricular areas that hope to survive the decade are centering their objectives around a core of analytical or decision-making skills. Students must have these skills if they are to thrive as adults.

Core decision-making skills include defining the problem, identifying alternative solutions to the problem, examining the positive and negative consequences of each solution, selecting the best alternative, and evaluating the decision. These same skills apply whether one is choosing to solve a communication problem (write a letter? phone? go in person?) or to solve a nutrition problem (cupcakes, green pepper, or potato chips for a snack today?).

There are many problems involved with decision-based curricula, and health education is one area in which



these problems can get out of control unless plenty of pre-planning is done. The problem outlined at the beginning of this article is a common one. The teacher was convinced that she had failed because her students decided to eat non-nutritious foods.

All too often health educators feel that presenting the facts, practicing a few decision-making skills, and *hoping* that students will choose the "right" way is enough.

Students are supposed to arrive miraculously at the healthwise decision and behavior on their own. This can only create frustration for the teacher, because students may indicate on a test that carrots are better than cupcakes, but in reality, most of them will turn down a carrot in favor of a cupcake.

As teachers, we often lose sight of the fact that the behavior and choices of children between the ages of eight and twelve are difficult to control and predict. Teenagers are likewise difficult to predict. Young children often will exhibit healthy behavior and attitudes because they know that these traits are pleasing to adults. Older children, however, are often more interested in gratifying themselves.

We are grimly reminded of their

interests when they tell us that they feel *good* when they are high on marijuana, or when they tell us that cupcakes taste far better than green peppers.

In light of this, are our health education efforts in vain? They may be if we blithely continue to present facts, present minimal decision-making skills, and hope that students will make the "correct" decisions. Part of the whole philosophy of a decision-based curriculum is to let go of the students and allow them to make those decisions. The sad truth is that we feel insulted when the students don't choose our way.

Realistically, our best efforts and desires will be served if we change our expectations. Our responsibilities are to

### More adults are choosing to follow healthy lifestyles.

teach applicable health information, model positive health behaviors (positive self esteem, good dental and nutritional habits, regular exercise, tobacco-free living, etc.) and reinforce learned analytical and decision-making skills by emphasizing the importance of this process in all aspects of daily life. Finally, we owe it to our students to

provide an atmosphere in which healthwise behavior is encouraged and applauded for its own sake.

When our students eat cupcakes, potato chips, and candy bars, we must be able to say to ourselves, "I taught them well and gave them all I could. I am not ultimately responsible for their behavior."

We must also keep in mind that more and more adults are choosing to follow healthy lifestyles after years of unhealthy behavior. They are finding that their feelings of well-being are far more pleasurable than the results of abusive behaviors.

The choices that these people are making are based upon the sum total of all past influences and experiences. Since school health education programs influence future adults, they are in an ideal position to figure importantly in those decisions.

As in all other subject areas, we in health education are not only teaching skills for the present. We are also establishing the foundations for lifelong skills, behaviors, attitudes, and decisions.

*Carolyn F. Hoover is health/science coordinator for Fairbanks North Star Borough School District.*

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December 1982

## Adolescent nutrition said crucial to health

By Joan M. Pelto  
and Edie Sidle

Groups of parents often ask about the nutritional needs of their junior high and high school aged children. For the most part, nutrition for adolescents is simply a matter of "open the cupboard and let them eat." Because they are growing so fast, adolescents are always hungry. If they eat enough it's nearly impossible for them to come up short of most nutrients.

### Dieting for Wrestlers

Usually in any group, however, there is one mother who says, "What can I do to persuade my son to eat well during wrestling season? The coach wants him to diet down to the next lower weight class." There is no satisfactory answer for those concerned parents. What their son is expected to do is *lose* weight during a normal time of growth and weight *gain*. His failure to comply — even for health reasons — usually means his expulsion from the team.

Dieting for wrestlers has earned a

bad name in many communities. The use of diuretics, laxatives, forced vomiting, and prolonged steam baths are all methods used to "make the weight."

But adolescence is the time of the last great growth spurt. At no other time in a boy's life, since infancy, has he needed the nutrients he needs then. To force him to purge himself in the name of competitive sports is an offense against his potential. Failure to gain weight and grow appropriately in any

period during the growth spurt years (12 to 16 years on the average for boys) cannot be "made up" later. Bone closure is bone closure. The bones can't "re-open" and grow longer just because wrestling season is over.

The diet regimen of most wrestlers includes limiting what they eat and how much they eat. This is done with no chance to learn anything about which foods they should eat. The few foods eaten, as often as not, are foods of low nutrient density which briefly satisfy hunger but are not necessarily wise food choices. Instead of simply forced dieting (not to mention the other methods used to lose weight) why not use the wrestling season as a time to practice optimum nutrition? A well balanced diet, with foods chosen from a variety of sources, could establish lifelong good eating patterns. Since the weight of the wrestler is so important, why not allow a modest amount of weight *gain* during the season?

Is there some way in which coaches,





parents, students can come together and establish some workable ground rules? Since every boy is different in attaining his growth, the eight or ten weeks of any given season may be the critical time when his growth spurt may occur. Is it the right of anyone to deny a boy this opportunity?

#### Dieters

While the male adolescent is downing diuretics and taking steam baths because the wrestling coach wants him to "diet down to the lower weight class," the female adolescent is often in the same battle in the struggle to be fashionably thin. In one study, 70 percent of teenage girls wanted to lose weight even though only 15 percent were overweight by adult standards. For most teenagers, dieting does not become a problem. However, for an increasing number of adolescents, efforts to lose weight can become life-threatening.

*Anorexia nervosa* (AN) is an illness affecting mainly adolescent girls. With AN, the adolescent goes on a diet and

continues with the diet even though his or her weight is far below normal. Besides extreme weight loss, other aspects of AN include a high energy level, eating binges coupled with self-induced vomiting, exaggerated interest in food, distorted body image (they continue to see themselves as fat even when they have become thin to emaciation), fear of physical maturation and adulthood, and a conflict between seeking independence and being dependent.

Typically, the anorectic is of above-average intelligence, introverted, perfectionistic, compulsive, and overly sensitive. The victim of *anorexia nervosa* typically does exceptionally well academically, but withdraws from peer relationships, preferring isolation. With AN, there is a feeling that control over one's own life is missing, and there are feelings of inadequacy.

The key to combatting *anorexia nervosa* is to detect it early. The adolescent with *anorexia nervosa* conceals the bizarre eating habits and use of

laxatives or diuretics to accelerate weight loss, to the point where family members may be unaware that a problem exists.

This illness is serious enough that it can last for 20 years or more, and it has a mortality rate of 10-15 percent. Depending on the length of time a victim is involved, starvation due to AN can cause physical changes involving body growth, cardiovascular and renal functions, as well as mental changes.

Anorectics need nutritional, medical and psychiatric support. If an adolescent is a suspected anorectic, the school nurse, a social worker or a health care provider should be contacted. A bibliography of materials about the disease can be obtained from Anorexia Nervosa and Associated Disorders (ANAD), P.O. Box 271, Highland Park, Illinois 60035.

*Joan M. Pelto is chief nutritionist and Edie Sidle is Women, Infants and Children program coordinator for the Alaska Department of Health and Social Services.*

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January 1983

## Health fairs are community projects

By Elizabeth Eggert

Health Fairs, under the auspices of the National Health Screening Council for Volunteer Organizations, Inc. has begun a second year of operation in Alaska. In the eight months between October 1981 and the close of the project year in June 1982, 7,000 Alaskan citizens attended the 22 Health Fairs in 13 Alaska communities. The project is still growing. For project year 1983, we anticipate, at a minimum, doubling the number of 1982 sites. To accomplish this, we need you.

You are needed to encourage students and parents to recognize their responsibility for their own good health.

You are needed to involve the schools in your community Health Fair. There are posters for art classes to design, exhibits for shop classes to build, health education subjects for students to research, healthy snacks for home economics students to prepare, health surveys for journalism students to sponsor, statistics and tabulations for math classes to compile and screenings for students to staff.

You are needed to set the example for young Alaska citizens by actively

pursuing a healthy lifestyle for yourself, and by being willing to ensure that others know how to do the same.

You are needed to be the link between the Health Fair site coordinator and the educational facilities in



your community. The more people and groups that are involved in the Health Fair, the more successful it will be. You have access to people, talents, and resources that are essential to the smooth operation of the Health Fairs. Most communities in Alaska host one Health Fair a year. The concentration devoted to one Health Fair site presents a perfect opportunity for students and educational leaders to adopt the Health Fair as a class project.

How do you initiate involvement with the Health Fairs? If you are aware of the individual that is filling the role of site coordinator in your community, contact that person directly and offer your involvement. If there is no such person available, contact the Chevron-Alaska Health Fair Project office and we will put you in touch with the right individual. The address and phone number is:

Chevron-Alaska Health Fair Office  
P.O. Box 1139  
Anchorage, Alaska 99510  
(907) 338-7444

We look forward to including all Alaska schools in the Health Fair project for 1983.



# Nutrition said crucial

By Marguerite Stetson

Potato chips don't count as a vegetable. They taste good, and they can be a fun addition to the diet, but with only five percent of your daily vitamin C, 10 potato chips have 114 calories. A delicious baked potato with 50 percent of your day's requirement for vitamin C has only 145 calories.

In a recent survey of sixth graders in Fairbanks, 70 percent of these 114 students reported they consumed less than four servings of fruits and vegetables on the day of the survey. The average number of servings of fruits and vegetables per student was 2.8.

Fruits and vegetables provide an abundance of vitamin C and vitamin A. Broccoli, potatoes, cabbage, berries and oranges are all good sources of C; bright green and yellow fruits and vegetables are good sources of A. Broccoli receives a high rating for both nutrients.

Since kids eat when they are hungry, what are they eating in place of fruits and vegetables? Thirty-five percent of the sixth graders surveyed ate one or two candy bars, 50 percent ate potato chips, 19 percent ate cake and 56 percent drank a soda pop.

In fact, of the 56 percent who drank soda pop, each student averaged one and one-third cans per day. One 12-ounce can of soda pop has more calories than one baked potato and no vitamins or minerals.

Parents and teachers can help students improve their eating habits by emphasizing the importance of eating foods that provide nutrients. Parents can keep the refrigerator stocked with fruits and vegetables in place of the low nutrient, high calorie snacks consumed by some of these sixth graders. Some teachers have tried holding snack breaks in the morning where only fruits or vegetables—no low nutrient foods—can be eaten.

Many students need only encouragement to select fruits and vegetables for snacks, lunches or meals. Try food tasting parties in class. Taste raw vegetables: zucchini, rutabaga or green pepper. Do some cooking: saute vegetables—any assortment—done just crisp-tender.

Have each student record the fruits and vegetables he or she consumes during a day. Do they meet or exceed four servings? If not, what can they do the

next day to increase these servings? Maybe just substituting a potato at dinner instead of chips will make four servings. Or a glass of orange juice instead of soda pop. How about an apple instead of candy.

*The Secrets of Success* is a new fifth grade nutrition education system developed by the Dairy Council of California. One of the first activities is to keep track of what you eat. Then, look at your food record, determine one food group where you consistent-

ly eat less than recommended amounts, and work on increasing your consumption in that group.

Knowledge is only one part of nutrition education. The most important part is behaving in such a way that you consume the amounts of nutrients that you know you need every day.

For help in teaching nutrition, contact Marguerite Stetson, Nutrition Specialist, Cooperative Extension Service, University of Alaska.

March 1983

## Good diet provides key to that 'competitive edge' in athletes

By Debra French

Athletes, whether amateur or professional, are always striving to find the tantalizing "competitive edge" that will put them out in front, ahead of their opponents. But there are no special foods or gadgets that will result in the "winning combination." And misinformation about nutrition can actually be harmful to an athlete's performance.

Many people, for example, mistakenly believe that protein is a primary source of muscular energy. But protein is not a major energy source in a well nourished person. Carbohydrate is the body's first choice as an energy source, followed by fat and then protein.

Protein is an "expensive" source of energy, not only in dollar cost, but in metabolic cost as well. Protein requires extra water for increased urea production. Since urea must be eliminated in the urine, the rest of the body is robbed of its precious coolant, water.

Protein carries out many functions in the body. One such function is the building, maintaining and repairing of muscle tissue. Since protein is considered "the muscle builder" it is a common misconception that the more protein consumed, the bigger the muscles.

Even though this concept may seem logical, it does not stand up to scientific testing. Muscles are 70 percent water, 7 percent fat and only 22 percent protein.

An athlete loses only slightly more protein a day than a non-athlete.

Therefore an athlete does not need to purchase expensive protein supplements to meet this small increased need. At least two servings of high protein foods from the milk and meat groups would meet an athlete's recommended dietary allowances.

The method to build and develop larger muscles is to make them "work." Muscles will respond by taking up nutrients including protein so they can grow. The muscle cells will take what protein they need for building, and the remaining amount will be used for energy or stored as fat.

Nutrition misinformation has led to a second faulty practice: eating raw eggs to improve performance.

### Protein is an "expensive" source of energy.

In truth, eating raw eggs can be harmful. There is the possibility of bacterial contamination with salmonella, which causes food poisoning. In addition, raw eggs contain avidin, which destroys biotin, a member of the B-complex vitamins.

Cooking neutralizes avidin and makes biotin available to our bodies, thus cooked eggs digest well and serve as a good source of protein.

A mistaken belief has emerged recently involving the consumption of tea or coffee to improve performance. Both tea and coffee do contain caffeine, which is a stimulant, and some researchers have found that caffeine can



improve performance in endurance events.

Drinking a beverage that contains caffeine about an hour before an event stimulates the body to burn fat instead of carbohydrate as a fuel. As a result, less muscle carbohydrate is burned and performance is often extended.

Not all athletes, however, will get this effect from caffeine. In fact, some may experience a negative, hypersensitive response. Caffeine also stimulates increased urine production, which can deplete body water.

A fourth faulty idea is that vegetarian athletes cannot get enough protein to develop muscles and maintain strength. On the contrary, however, a vegetarian athlete can obtain all the nutrients needed for top performance by eating a wide variety of foods.

The four food groups (meat, milk, fruit-vegetable, and grain) serve as the basis for well-planned vegetarian diets. Meat alternatives, such as dry beans and peas, nuts, soy products, eggs and cheese, supply the protein and other nutrients usually supplied by meats.

In addition, strict vegetarians can combine plant proteins such as those in beans and wheat or peanuts and wheat to form a complete protein source that will supply the protein necessary for top performance.

The belief that athletes require extra vitamins and minerals — and that they should take vitamin pills to “supercharge” their bodies — is another misconception. Our bodies require specific amounts of all the vitamins and minerals. Any excess will either be lost in the urine or stored for future use.

## ***Vitamins and minerals do not produce energy.***

Taking large amounts of some vitamins, especially A and D, can be harmful since they are fat soluble. There are four fat-soluble vitamins which are dissolved in fat and stored for future use: vitamins A, D, E and K. Excesses of vitamins can build up in the

body, causing an imbalance or even becoming toxic.

The remaining vitamins are water soluble, so their excesses are flushed out in the urine. But this loss can be very wasteful and expensive, especially if money has been invested in supplements. Contrary to some popular misconceptions, vitamins and minerals do not provide energy. Vitamins aid in the utilization of energy, but they do not provide calories.

Most athletes can obtain recommended allowances for all the essential vitamins simply by eating a well balanced diet. That, along with desire, training, talent and physical health, is the key to the “winning combination.”

For more information on vitamins, write the Washington State Dairy Council, 3830 Stone Way North, Seattle WA 98103. The Council will send you one free copy of “Vitamin Facts.”

*Debra French, R.D., is nutrition consultant for the Washington State Dairy Council.*

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April 1983

# ***Iron deficiency prevalent among Alaskans***

By Elizabeth D. Nobmann

Iron deficiency is a problem that affects many children in Alaska. In 1980, representatives of Alaska Area Native Health Service and the Native Health Corporations developed long range objectives, one of which is to reduce iron deficiency anemia among Alaska Natives to comparable U.S. levels by 1990.

This objective was selected for several reasons. First, anemia, which is a late stage of iron deficiency, can be an indicator of poor nutrition in general.

Second, anemia reduces the ability to work.

Third, anemia is associated with reduced resistance to infections. A study in the Bethel area, for example, found that when the rates of serious illness in babies were examined, anemic babies showed significantly more serious illness than non-anemic babies.

Fourth, anemia has been reported to affect learning. Researchers have reported short attention spans, perceptual restrictions, and lower intelligence and vocabulary test scores associated with anemia. Classroom

teachers have reported more hyperactivity and conduct disturbances among anemic children. For all of these reasons anemia is an important problem.

How many people are affected by anemia in Alaska? Studies of over 500 children in both the Bethel and the Bristol Bay areas found 22 percent were anemic. In the Bristol Bay study more than 43 percent could be considered iron deficient based on the fact that they responded when given a test dose of iron medicine. These percentages compare to a 3 percent rate of anemia among children nationwide. Comparable rates for non-Native Alaska children, unfortunately, are not available.

Another interesting fact is that of all the iron we eat, only some is absorbed. Iron from meat, fish and poultry sources (known as *heme iron*) is well absorbed. Iron from sources like plants and eggs (known as *non-heme iron*) is less well absorbed.

However, there are two kinds of food that will increase non-heme iron absorption if you eat them with a meal. They are: 1) meat, fish or poultry (because of an unknown factor known as the MFP Factor), and 2) a vitamin C

rich food, or a combination of these two things. Foods that may reduce iron absorption include tannin (found in tea), calcium and phosphate salts (phosphate is found in soda pop as well as in other foods), and the food preservative EDTA.

During 1977-78, three independent dietary studies provided valuable information about what Alaskan children eat. The studies, conducted in Bethel villages, in Bristol Bay villages and in three urban communities, all found iron consumption was generally low.

One study found iron fortified foods were not always available in village stores. The Bristol Bay study found that more than half of the “meals” (a “meal” was anything eaten during one-sixth of the day), did not meet the criteria for a meal high in absorbable iron.

Yet these findings do not seem to explain why there is more anemia in Alaska.

Still to be answered are these questions: Are larger amounts of iron absorption inhibitors, such as tannin, phosphates or EDTA, eaten by Alaskans? Are there other dietary practices



that may influence anemia? These questions are being investigated by the Centers for Disease Control, Alaska Investigation Division.

While causes have not yet been identified, some actions have been shown to reduce anemia. Early last February a work-study conference was held to discuss what was known and what could be done. The researchers, clinicians and program managers present agreed that the Alaska Area Native Health Service should work with Native communities to increase iron absorption in the targeted population of teenagers in Western Alaska.

They recommended a strong educational effort be directed to the general community, to school food service workers, and to health workers, utilizing the school curriculum, health fairs and mass media.



Another strategy suggested is diet modification — assuring that children have as much iron absorbed as possible from their school lunch, for example. A third option is food fortification. This could be done in one of three ways: 1) Develop a new iron-fortified product which is acceptable to teenagers; 2) Fortify foods such as crackers with heme, a product now available in Chile; or 3) Distribute heme-fortified cookies, which were developed and are used in the Chilean school lunch program.

All these options are being considered, but we need suggestions and reactions from educators and other members of the community. Such information will help decision-makers and agency representatives determine what actions to take. Please address your comments to Elizabeth D. Nobmann, Chief, Area Nutrition Section, Alaska Area Native Health Services, P.O. Box 7-741, Anchorage, AK 99510.

# Schools can help provide children's daily nutrition

By Ruth Benigno

Of the three daily meals, many nutritionists tell us breakfast is the most important, particularly for growing children.

A series of experiments popularly known as the Iowa Breakfast Studies, reported from 1949 to 1960, showed that skipping breakfast results in decreased efficiency in the late morning hours, reduced work output, slower mental reactions, increased muscular fatigue and a poor attitude toward school work.

The nutrients missed at breakfast are seldom made up during the day. Children with poor morning food habits usually have poor food habits throughout the day.

Yet, according to many studies, many of our children do not receive an adequate breakfast. The Department of Health, Education, and Welfare reported that up to one-fourth of the school children in this country go to school without eating breakfast.

The American Medical Association estimates that only one out of five Americans eats an adequate breakfast. A survey of 90,000 students in Minnesota in 1977 revealed that eight percent ate nothing in the morning and 68 percent ate breakfasts of empty calories—soda pop, gum or candy.

We hear much the same thing in Alaska from teachers and school administrators around the state.

There are many reasons why children may not be eating a good breakfast at home, or any breakfast at all, for that matter. While some families skimp on breakfast because of limited finances, nutritional deficiency knows no social class.

With the increase of families with a single parent or with both parents working, more and more children are left to prepare their own breakfasts—often pop tarts on the run or some other convenience food containing little nutrition. Also there are many children (and adults) who have no desire to eat in the early morning.

Breakfast at school in some cases has helped to alleviate problem behavior and negative attitudes toward learning. In the Southeast Alaska village of Hoonah the school breakfast program

evolved from a federally funded Follow-Through Program which served a mid-morning snack of cookies and milk.

Hoonah's Follow-Through director was quoted in the February 1978 *Alaska Education News* as saying that since the inception of the breakfast program the "physical health of the students has improved."

Prior to the breakfast program, she said, "their eyes weren't as bright. . . their gait wasn't as springy. With breakfast, they begin their school day with some positive note."

One major barrier to school breakfast programs is the feeling of many people that breakfast is the responsibility of the home—primarily of the mother. But if the home is not fulfilling this responsibility, can the schools offer an alternative? Under the breakfast program, eating breakfast at school is not mandatory but the child who has not eaten at home has an opportunity to eat if he or she chooses.

A second barrier is cost. But resourceful people can deal with this. In Northwest Alaska, Selawik started a breakfast program with home economics students doing the planning, preparation, serving and clean-up. These students not only provided a Breakfast Program but learned skills which will be invaluable to them should they decide later to seek employment outside the village. The school's principal in 1979-80, when the program began, reported that "the kids are performing much better in class and are eager to learn."

The U.S. Department of Agriculture funds the school breakfast program. The basic school breakfast includes at least a serving of fruit, vegetable or juice; milk; and bread or cereal. Many schools also include a serving of meat or meat alternate such as cheese, eggs and peanut butter.

Operating a breakfast program does not have to be complicated. Facilities can be minimal. Breakfast can be a snack served at mid-morning if the basic meal pattern is met.

Severe need reimbursement rates are available to most Alaskan schools, providing up to \$1.01½ for a free Breakfast, 96½ cents for a Reduced Price



Breakfast and 24 cents for a Paid Breakfast.

Expansion of the program has been slow, but USDA is encouraging states to promote the breakfast program by contacting statewide groups and even serving them school breakfast. In cooperation with this effort, the School Food Service office recently served a simple school breakfast to Department of Education employees in Juneau, and they plan to serve others to the Alaska School Boards Association Annual Meeting and the State Nutrition Education and Training Program

advisory council.

Breakfast programs in Alaska have increased from 17 schools in 1977 to 44 schools in 1980. This represents only 15 percent of the schools participating in the school lunch program, and many more schools would be eligible for assistance in getting their students off to a good nutritional start each school day.

For information and assistance in setting up a school breakfast program in your school district, contact the School Food Service office at the Department of Education, phone 465-2808.

The committee also plans special buffet lunches, usually held on holidays, when the students receive an especially good meal for a low price.

Recently the students added a new attraction to the lunch program. A salad bar was set up two days each week. The salad bar brought comments like, "A-1" and "delicious" from students and teachers alike.

The benefits of the food advisory committee are many, Schnick said. "It has made me more aware of the program at the high school level and it's fun to implement the ideas that the student advisory committee has." Two-year member Ben Brown added, "Our efforts as a group have helped the school and we've learned a lot in the process."

There is a national organization of food advisory committees, that provides information in the form of news letters and can aid in the starting of a new program. Information about the Youth Advisory Council is printed periodically in the *School Food Service Journal*.

*Christiansen not only was a member of the Palmer High School student food advisory committee, but he is currently the student representative on the State Nutrition Education and Training Program Advisory Council.*

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—May 1983—

## Student help 'makes a difference' in school lunch

By Scott Christiansen

Students help write their own school lunch menu at Palmer High School, thanks to the student food advisory committee whose purpose is to provide student input to the school lunch program.

The committee was formed a year ago by Kathleen Schnick, a registered dietician and director of the school lunch program for the Matanuska-Susitna Borough Schools.

"I needed some feedback from the high school students as to what foods they wanted served and the problems they saw with their lunch program," Schnick said. She also has implemented committees at Wasilla High and Palmer Junior High.

The committee consists of 11 members representing all grade levels. There are two officers, president Colene Fiscus and secretary-treasurer Andrea Leveen. About half of the students are in their second year as advisory committee members.

The students learn about nutrition as well as how to run a business as large as the Mat-Su Borough school lunch program.

In its first year the committee made its goal to completely change the school lunch menu. The committee started with a school-wide survey to determine what items the students would like to see on the menu.

Next they composed a new menu with a wide variety of foods, using the information gathered from the survey

and what they had learned about food production costs.

"I've definitely noticed the difference," was a comment from a Palmer High School senior after the implementation of the new menu.

Each year the committee has taken one field trip to the school district central kitchen. This year they helped prepare 2,000 portions of lasagna.

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—May 1983—

## Nutritionist says school lunches deserve credit

By Joan Pelto

I'm tired of hearing people "bad mouth" school lunch. What do they want? A leaf of lettuce, half an apple and a cup of herb tea? That may be adequate as a snack for an overweight adult but it's certainly not enough for a growing child or adolescent.

What started my tirade was an excerpt from an article in *The Tundra Drums* saying "...their lunches are high in starch..." Of course they are high in starch. What's wrong with starch? It is *good* complex carbohydrate, the stuff the National Academy of Sciences keeps saying we should be increasing in our diets.

So, what is a School Lunch? For a school or school district to receive federal (USDA) school lunch money, they must agree to serve certain foods



**Student advisory committees can help improve school lunches while students learn about nutrition and running a business.**



in prescribed amounts. Remember, this is a *minimum*. In today's tight economic picture the cost of even the minimum is high.

"So what," you say. "The schools get USDA foods and money." Do you know how much money they get? Well, I'll tell you this, it really makes the districts struggle to keep the budget balanced.

Some schools and districts in Alaska choose to serve all children, including those who do not qualify for free or reduced priced lunches, at no cost. Others charge anywhere from 25 cents to \$1.75 for the paying child. The cost of food (including shipping costs), overhead (such as heat, lights, cooking fuel), and labor must all be paid out of these funds or other school funds. So it isn't free.

As to foods, the schools do not get enough to make up full meals. They must buy most of the meat, all of the milk, and much of the other foods.

Then, back to starch. Remember, most starchy foods are good sources of iron and B vitamins as well as the energy essential for growing children.



Children need extra energy for growth. Starch should be the best source of that energy.

A school lunch that includes milk, a protein food, two fruits and/or vegetables and one or two servings of bread or other "starch" food is not "high in starch." It is well balanced, nutritious and interesting; and it provides about one-third of the child's daily food needs.

Granted some school lunches are more like McDonalds or Burger King than what mom in Iowa used to make. But today's school children seem to be bigger and brighter than "mom" and certainly need "the whole thing" of school lunch.

*Joan Pelto is chief nutritionist for the Alaska Department of Health and Social Services. Her article originally appeared in Alaska Nutrition News, a newsletter for Alaska public health nurses.*

# BASIC FOUR



## Fruit & Vegetable



4

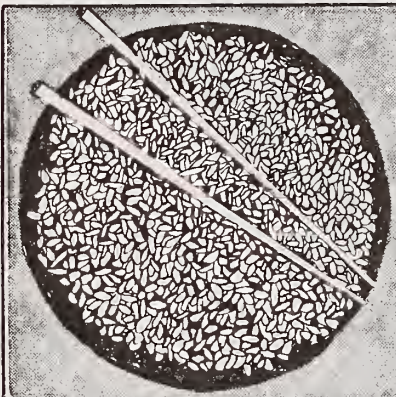
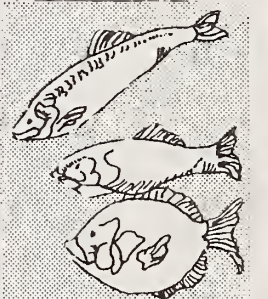
SERVINGS



## MEAT



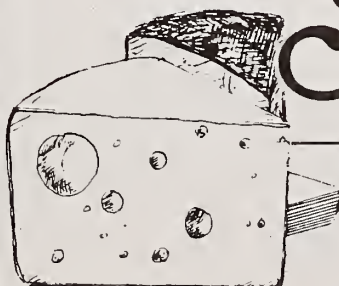
2 SERVINGS



GRAIN

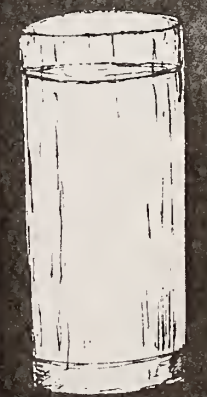


4 servings



## MILK

3 servings





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The Nutrition Education and Training Program of the United States Department of Agriculture is available to all individuals regardless of race, color, national origin, sex, age or handicap. Persons who believe they have been denied equal opportunity for participation may write to the Secretary of Agriculture, Washington, D. C. 20250.

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